Q1) s_n is a Cauchy sequence if, $\forall \varepsilon > 0$ _____ ensures $|s_n - s_m| < \varepsilon$.

Q2) If s_n is Cauchy, which property is <u>not</u> necessarily true of s_n?

Q1) s_n is a Cauchy sequence if, $\forall \varepsilon > 0$ _____ ensures $|s_n - s_m| < \varepsilon$

(A) $\exists N$ s.t. $n > N$ (B) $\exists N, M$ s.t. $n > N, m > N$ (C) $\forall N$, $n, m > N$
(D) $\exists N$ s.t. $m, n > N$ (E) $\exists N$ s.t. $n, m < N$

Q2) If s_n is Cauchy, which property is not necessarily true of s_n?

(A) convergent (B) bounded above (C) monotone
(D) bounded below (E) the limit exists

Q3) If s_n is not bounded and is monotone, what must be true?

(A) the limit exists (B) convergent (C) decreasing
(D) increasing (E) Cauchy

Announcements: Math Movie Competition